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## HEAD-MOUNTED DISPLAY SYSTEM

BIL

Related Application application NO.08/77,536 filed 9/03/1996, now abando sed, which is This is a Continuation-in-Part of U.S. Serial No. application of 08/287,970, filed on August 9, 1994, which is a application NO. Continuation-in-Part of U.S. Serial No. 08/220,042, cs/517,13, filed on March 30, 1994 which is a Continuation-in-Part on 10/21/1994 of U.S. Serial No. 08/141,133, filed on October 22, now abandones of U.S. Serial No. 08/141,133, filed on October 22, which is herein by reference in their entirety.

## 10 Background of the Invention

Head mounted display systems have been developed for a number of different applications including use by aircraft pilots and for simulation such as virtual imaging. Head mounted displays are generally limited by their resolution and by their size and weight.

Existing displays have relatively low resolution, and because of the size and weight of available systems, these displays are often positioned at the relatively large distance from the eye. Of particular importance, is the desirability of keeping the center of gravity of the display from extending upward and forward from the center of gravity of the head and neck of the wearer, where it will place a large torque on the wearer's neck and may bump into other instruments during use.

There is a continuing need to present images to the wearer of a helmet mounted display in high-resolution format similar to that of a computer monitor. The display needs to be as non-intrusive as possible, leading to the need for lightweight and compact system. Existing head mounted displays have

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